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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,545	10/12/2005	Philippe Vincent	TFR0206	2552
7590 07/08/2008 Valco Climate Control Corp Intellectual Property Department 4100 North Atlantic Boulevard Auburn Hills, MI 48326				
			EXAMINER ROSATI, BRANDON MICHAEL	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 07/08/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,545

Applicant(s)

VINCENT ET AL.

Examiner

BRANDON M. ROSATI

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10 and 15-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4, 6-10, and 15-22 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, the phrases "the following relations are respected," in line 2, "Ymax is the maximum available distance," in lines 11-12, and "Xmax is the maximum available distance" in lines 13-14, are indefinite because it is not clear is the term respected means that it is required or not. Furthermore, it is unclear what Xmax and Ymax are. It is noted that the parenthetical citations in this claims as well as all the other claims throughout the application do not further define a claim limitation.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 6-10, 15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abell et al. (U.S. Pub. No. 2002/0074113 A1) in view of Martins (European Pat. No. EP 0 570 287 A1).

Regarding claim 1, Abell et al. disclose in Figure 1, a radiator (i.e. heat exchanger) comprising a first fluid box (i.e. manifold) (12), extending from a first front to a second front of the radiator along a longitudinal axis contained in a median plane of the radiator, a heat

exchanger bundle (i.e. tubes) (14), extending approximately along said median plane, a fluid inlet or outlet tubing (i.e. port) (66), projecting from the end of the fluid box located in the first front surface, and the first fluid box and at least a segment of the tubing are obtained by assembling two parts out of folded or stamped sheet aluminum, each of the two parts defining approximately half of the fluid box and half of the segment (Paragraphs [0023]-[0026], [0030], and [0033]-[0035]). Abell et al. does not disclose inclined tubing. It is noted that the phrase "for heating the passenger compartment of a vehicle" is a statement of intended use and the device is capable of performing the function. It is further noted that claim 1 contains a product by process limitation (i.e. the fluid box and at least a segment of said tubing are obtained by assembling two parts out of folded or stamped sheet aluminum, each of said two parts defining approximately half of the fluid box and half of the segment) and that the product by process limitation does not limit the claim to recite the step, just the structure obtained by performing the step. However, Martins discloses in Figures 1 and 2 the concept of utilizing an inlet tube (i.e. flexible tube) (14) in which the orientation (i.e. inclination) can be chosen by adjustment (Page 1, paragraph 7). Hence it would have been obvious at the time the invention was made, to one of ordinary skill in the art, to modify the teachings of Abell et al. with the concept of having an adjustable inlet of Martins because the adjustability would allow for the radiator to fit better among other components within the engine.

Regarding claim 6, Martins discloses in Figures 1 and 2, a first part of the tubing (18) connected by an elbow (region near 22) to a second part (14). It is noted that when in combination with Abell et al., the second part will be located on the same side as the fluid box with respect to a boundary plane perpendicular to the longitudinal axis and tangential to the

elbow. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 7, Martins discloses in Figures 1 and 2, a second part (14) extending approximately perpendicular to the longitudinal axis and also tangential to the boundary plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 8, Martins discloses in Figures 1 and 2, the second part separating from the boundary plane starting from the elbow. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 9, as best understood by the Examiner, Martins discloses in Figures 1 and 2, a first part with a length of a vector, extending to an intersection point and having angles α and β , both of which are not zero. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 10, Abell et al. disclose in Figure 1, a segment of tubing is adjacent the first box and the fluid box and the segment of the tubing are formed by the inseparable assembly of the two parts. It is noted that claim 10 contains a product by process limitation (i.e. formed by the inseparable assembly of the two parts) and that the product by process limitation does not limit the claim to recite the step, just the structure obtained by performing the step.

Regarding claim 15, Abell et al. discloses a second fluid box provided along a longitudinal axis contained in the same plane, the heat exchange bundle placed between the two fluid boxes. It is noted that although the second box is not shown, Abell et al. disclose that a

manifold of similar design to the first is at each end of the heat exchanger tubes (Paragraph [0023]).

Regarding claim 17, Martins discloses in Figures 1 and 2, the longitudinal axis contained in the plane orthogonal to the median plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 18, Martins discloses in Figures 1 and 2, discloses a second fluid box wherein at least a segment of the tubing are obtained by assembling two parts each of the two parts defining approximately half of the fluid box and half of the segment (Paragraphs [0023]-[0026], [0030]). It is noted that although the second box is not shown, Abell et al. disclose that a manifold of similar design to the first is at each end of the heat exchanger tubes (Paragraph [0023]).

Regarding claim 19, Martins discloses in Figures 1 and 2, tubing with a first part inclined with respect to the longitudinal axis with respect to the plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim. It is further noted that although the second box is not shown, Abell et al. disclose that a manifold of similar design to the first is at each end of the heat exchanger tubes (Paragraph [0023]).

5. Claims 2-4, 16, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abell et al. (U.S. Pub. No. 2002/0074113 A1) in view of Martins (European Pat. No. EP 0 570 287 A1) in further view of Hotta (U.S. Patent No. 4,287,943).

Regarding claim 2, the combined teachings of Abell et al. and Martins disclose all the claimed limitations including the first part of the tubing being offset towards a first said of the

plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim. Abell et al. and Martins do not disclose the radiator being housed in a box. However, Hotta discloses in Figure 1, the concept of placing a radiator in a box (Column 2, lines 34-54). Hence it would have been obvious at the time the invention was made, to one of ordinary skill in the art, to modify the combined teachings of Abell et al. and Martins with the box of Hotta as a way to protect the radiator from damage.

Regarding claim 3, Martins discloses in Figure 1 and 2 a first part of the inlet tube inclined with respect to the median plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 4, Martins discloses in Figures 1 and 2 a first part of the tubing inclined towards the first side of the median plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 16, the combined teachings of Abell et al. and Martins disclose all the claimed limitations except the radiator being housed in a box, the box being approximately in airtight contact with an area of the front surface. However, Hotta discloses in Figure 1, the concept of placing a radiator in a box (Column 2, lines 34-54). Hence it would have been obvious at the time the invention was made, to one of ordinary skill in the art, to modify the combined teachings of Abell et al. and Martins with the box of Hotta as a way to protect the radiator from damage.

Regarding claim 20, the combined teachings of Abell et al. and Martins disclose all the claimed limitations including the first part of the tubing being offset towards a first side of the plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to

accommodate the limitations of the claim. Abell et al. and Martins do not disclose the radiator being housed in a box. However, Hotta discloses in Figure 1, the concept of placing a radiator in a box (Column 2, lines 34-54). Hence it would have been obvious at the time the invention was made, to one of ordinary skill in the art, to modify the combined teachings of Abell et al. and Martins with the box of Hotta as a way to protect the radiator from damage. It is further noted that Abell et al. disclose that a manifold of similar design to the first is at each end of the heat exchanger tubes (Paragraph [0023]).

Regarding claim 21, Martins discloses in Figures 1 and 2, Martins discloses in Figure 1 and 2 a first part of the inlet tube inclined with respect to the median plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Regarding claim 22, Martins discloses in Figures 1 and 2 a first part of the tubing inclined towards the first side of the median plane. It is noted that because the inlet tubing is flexible its orientation can be easily adjusted to accommodate the limitations of the claim.

Response to Arguments

6. Applicant's arguments, filed 4/23/2008, with respect to claims 1-4, 6-10, and 15-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vize (U.S. Patent No. 6,298,906 B1) discusses a radiator housing.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON M. ROSATI whose telephone number is (571)270-3536. The examiner can normally be reached on Monday-Friday 8:00am- 4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on (571) 272-4834 or (571) 272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 3744

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMR
7/2/2008

/Cheryl J. Tyler/
Supervisory Patent Examiner, Art Unit
3744